SEQUENCE LISTING

<110> Hamill, Owen P.
       Maroto, Rosario

<120> MECHANOSENSITIVE ION CHANNELS AND METHODS OF USE

<130> 265.00450101

<150> 60/535,327
<151> 2004-01-09

<150> PCT/US2005/000722
<151> 2005-01-10

<160> 7

<170> PatentIn version 3.2

<210> 1
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<213> Artificial

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<223> Channel blocker GsMTx-4 (Grammostola spatulata venom 4 kDa
       peptide)

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<213> Homo sapiens

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Lys Leu Phe Leu Leu Ala Cys Asp Lys Gly Asp Tyr Tyr Met Val Lys
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Lys Ile Leu Glu Glu Asn Ser Ser Gly Asp Leu Asn Ile Asn Cys Val
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Asp Val Leu Gly Arg Asn Ala Val Thr Ile Thr Ile Glu Asn Glu Asn
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Leu Asp Ile Leu Gln Leu Leu Leu Asp Tyr Gly Cys Gln Lys Leu Met
            100             105             110

Glu Arg Ile Gln Asn Pro Glu Tyr Ser Thr Thr Met Asp Val Ala Pro
        115             120             125

Val Ile Leu Ala Ala His Arg Asn Asn Tyr Glu Ile Leu Thr Met Leu
        130             135             140

Leu Lys Gln Asp Val Ser Leu Pro Lys Pro His Ala Val Gly Cys Glu
145             150             155             160

Cys Thr Leu Cys Ser Ala Lys Asn Lys Lys Asp Ser Leu Arg His Ser
            165             170             175

Arg Phe Arg Leu Asp Ile Tyr Arg Cys Leu Ala Ser Pro Ala Leu Ile
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Met Leu Thr Glu Glu Asp Pro Ile Leu Arg Ala Phe Glu Leu Ser Ala
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Asp Leu Lys Glu Leu Ser Leu Val Glu Val Glu Phe Arg Asn Asp Tyr
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Glu Glu Leu Ala Arg Gln Cys Lys Met Phe Ala Lys Asp Leu Leu Ala
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Gln Ala Arg Asn Ser Arg Glu Leu Glu Val Ile Leu Asn His Thr Ser
            245             250             255

Ser Asp Glu Pro Leu Asp Lys Arg Gly Leu Leu Glu Glu Arg Met Asn
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Leu Ser Arg Leu Lys Leu Ala Ile Lys Tyr Asn Gln Lys Glu Phe Val
        275             280             285

Ser Gln Ser Asn Cys Gln Gln Phe Leu Asn Thr Val Trp Phe Gly Gln
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Met Ser Gly Tyr Arg Arg Lys Pro Thr Cys Lys Lys Ile Met Thr Val
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Ala Pro Lys Ser Gln Phe Gly Arg Ile Ile His Thr Pro Phe Met Lys
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Phe Ile Ile His Gly Ala Ser Tyr Phe Thr Phe Leu Leu Leu Leu Asn
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Leu Tyr Ser Leu Val Tyr Asn Glu Asp Lys Lys Asn Thr Met Gly Pro
     370             375             380

Ala Leu Glu Arg Ile Asp Tyr Leu Leu Ile Leu Trp Ile Ile Gly Met
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Ile Trp Ser Asp Ile Lys Arg Leu Trp Tyr Glu Gly Leu Glu Asp Phe
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Leu Glu Glu Ser Arg Asn Gln Leu Ser Phe Val Met Asn Ser Leu Tyr
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Leu Ala Thr Phe Ala Leu Lys Val Val Ala His Asn Lys Phe His Asp
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Phe Ala Asp Arg Lys Asp Trp Asp Ala Phe His Pro Thr Leu Val Ala
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Glu Gly Leu Phe Ala Phe Ala Asn Val Leu Ser Tyr Leu Arg Leu Phe
465             470             475             480

Phe Met Tyr Thr Thr Ser Ser Ile Leu Gly Pro Leu Gln Ile Ser Met
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Gly Gln Met Leu Gln Asp Phe Gly Lys Phe Leu Gly Met Phe Leu Leu
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Val Leu Phe Ser Phe Thr Ile Gly Leu Thr Gln Leu Tyr Asp Lys Gly
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Tyr Thr Ser Lys Glu Gln Lys Asp Cys Val Gly Ile Phe Cys Glu Gln
     530             535             540

Gln Ser Asn Asp Thr Phe His Ser Phe Ile Gly Thr Cys Phe Ala Leu
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Phe Trp Tyr Ile Phe Ser Leu Ala His Val Ala Ile Phe Val Thr Arg
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Gly Thr Tyr Asn Val Val Val Val Ile Val Leu Thr Lys Leu Leu Val
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Ala Met Leu His Lys Ser Phe Gln Leu Ile Ala Asn His Glu Asp Lys
    610                 615                 620

Glu Trp Lys Phe Ala Arg Ala Lys Leu Trp Leu Ser Tyr Phe Asp Asp
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Lys Cys Thr Leu Pro Pro Pro Phe Asn Ile Ile Pro Ser Pro Lys Thr
                645                 650                 655

Ile Cys Tyr Met Ile Ser Ser Leu Ser Lys Trp Ile Cys Ser His Thr
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Ser Lys Gly Lys Val Lys Arg Gln Asn Ser Leu Lys Glu Trp Arg Asn
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Leu Lys Gln Lys Arg Asp Glu Asn Tyr Gln Lys Val Met Cys Cys Leu
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Val His Arg Tyr Leu Thr Ser Met Arg Gln Lys Met Gln Ser Thr Asp
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Gln Ala Thr Val Glu Asn Leu Asn Glu Leu Arg Gln Asp Leu Ser Lys
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cctcctcctc cctgccttcc tctccatcct cttcctcgcc gaacgaggtg atggcgctga     240

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